

Uncovering the Hidden Issues in E-Government Adoption in a Least Developed Country: The Case of Bangladesh

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ABSTRACT

Bangladesh, in common with many least developed countries, has been struggling to find a workable strategy to adopt information and communication technology (ICT) and e-government in its public sector organizations. There has been no satisfactory progress in this area despite a number of high-level initiatives. As a result, the country is failing to keep pace in e-government advances compared with other developing countries. This paper reports a study that involved focus groups and interviews with key stakeholders in Bangladesh. A process model is developed to show the interrelationships amongst the major barriers in the adoption of ICT in Bangladesh public sector. A lack of knowledge and entrenched attitudes and mindsets are seen as the key underlying contributors to the lack of progress. The paper introduces important directions for the formulation of long-term strategies for the successful adoption of ICT in the Bangladesh public sector and provides a basis for further theoretical development.

Keywords: Electronic Government, Information Technology Adoption, IT Strategy, IT in Public Administration, IT in Developing Countries, Least Developed Countries, Process Model

INTRODUCTION

Understanding a problem is the first half of the path to solving it- proverb

Modern governments are seeing a transformation in their work processes, modes of delivery and internal and external communications by virtue of Information and Communication Tech-

nology (ICT) applications. This use of ICT is commonly termed *e-government*, the primary objective of which is “to improve the activities of public sector organizations” (Heeks, 2004, p.1). E-government has revolutionized traditional systems and added new dimensions to the functioning of modern government to provide the best service for its citizens and to improve its internal efficiency. E-government is also closely linked to the global transition to a knowledge-based society (KBS) that modern governments are aiming for. However, e-government in

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many least developed countries (LDCs) is in its infancy, with failure in the initial adoption and use of ICT in the public sectors hampering further advances in e-government (Heeks & Bhatnagar, 2001). LDCs are distinguished by the Economic and Social Council of the United Nations in terms of three criteria, (1) low national income (gross national income per capita under US\$750), (2) weak human assets (health, nutrition and education) and, (3) high economic vulnerability (instability of agricultural production and exports, inadequate diversification and a small economy) (UN OHRLLS, 2008). Forty nine LDCs are identified at present.

Our study investigates two research questions to advance work in this area:

What underlying issues are most critical for e-government adoption in an LDC and how are these issues interrelated? Also, how can e-government adoption be facilitated in this context?

The research has practical significance because it focuses on a particularly important sphere of e-government. The three spheres of e-government include; (i) improving the government processes, that is, G2G (government-to-government or e-Administration); (ii) connecting citizens, G2C (government-to-citizens or e-Services); and, (iii) building external interactions, G2B (government-to-business) (Backus, 2001; Heeks, 2004). The focus of this study is on the first sphere, the improvement of the internal government processes with ICT. Improvements in this sphere have the potential for introducing many benefits. Being the largest user of an IT system, the public sector in an LDC can play the leading role in ICT diffusion throughout the country and can exert the greatest influence through its policies and regulations (e.g., Flamm, 1987; Nidumolu et al., 1996).

The original motivation for the study was provided by the lead author's involvement for a number of years in the public sector in Bangladesh and the problems encountered there. These experiences led to the belief that it was important

to focus on G2G, at least as much as G2C, despite a common misconception that e-government is mainly about delivering government services over the Internet (Allan et al., 2006; Dawes, 2002). This narrow vision of e-government does not take into account the "behind-the-scenes first-order changes" (Scholl, 2005, p.7) and the variety of government activities that occur within and between the government agencies; thus, this focus fails to recognize the essential use of technologies other than the Internet. In many LDCs, universal access to the Internet and citizen-centric services may be far out of reach — for example, in Bangladesh the Internet penetration rate is 1.3%, (ITU, 2009) — yet there may still be scope for substantial improvements in the internal G2G processes, with significant outcomes in terms of improving productivity, efficiency and transparency. Evidence for the importance of G2G relative to G2C is provided in the Australian case, where only 29% of the population use online services to contact the government, despite 64% of household having Internet access. Yet Australia holds one of the leading positions in the world e-government rankings (8th) and the public sector efficiency index (3rd), with the bulk of the internal government processes being driven by ICT (AGIMO, 2007; ITU, 2009; Tanzi et al., 2007; UN, 2008).

The study has further significance, because it contributes to theory in an important area. Walsham and Sahay (2006) noted the wide range of theories drawn upon in a survey of research on ICT in developing countries. These theories include structuration theory (as in Liu & Westrup, 2003; Walsham, 2002), actor-network theory (as in Braa et al., 2004; Stanforth, 2006) and institutional theory (as in Avgerou, 2002; Silva & Figueroa, 2002). The range of theories employed is not surprising, given the extent of the phenomena studied, ranging from the individual's usage of services to cross-cultural issues to the underlying technological issues. Furthermore, there are gaps in the theoretical underpinnings relating to IT adoption in G2G in developing countries, because much of the theory has been developed in other contexts.

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